

Amendment to the Claims

1 – 40. (canceled)

41. (previously presented) A method for transferring data on a network from a data source to an end station executing a multi-layer network protocol, including a network layer and at least one higher layer, through a network interface on the end station, comprising:

receiving in the network interface a packet which carries a data payload from a block of data in the data source, and a control field identifying the packet;

determining based on the control field in the network interface whether the packet matches a transmit control block (TCB), and if so transferring the data payload in the packet directly to a target buffer assigned by a process at a layer higher than the network layer.

42. (previously presented) The method of claim 41, wherein the control field in the packet includes a packet header.

43. (previously presented) The method of claim 41, wherein the multi-layer network protocol comprises TCP/IP, and the control field comprises a TCP/IP header.

44. (previously presented) The method of claim 41, including prior to receiving the packet, allocating the target buffer for a plurality of packets, and notifying the network interface of the allocated target buffer.

45. (currently amended) The method of claim 41, wherein the network interface is coupled to a network medium supporting a maximum packet size, and including transmitting a request from an application for transfer of a block of data from the data source, the block of data having a length potentially greater than the maximum packet size for the medium.

46. (currently amended) The method of claim 45, including notifying the network interface in response to the request of a the TCB for the block of data according to the multi-layer network protocol, and wherein the step of receiving the packet includes identifying packet using the TCB.

47. (currently amended) The method of claim ~~46~~ 44, wherein the network protocol comprises TCP/IP, and the TCB includes a sequence number of a first byte from the plurality of packets to be stored in the target buffer.

48. (currently amended) The method of claim ~~41~~ 45, wherein the TCB includes a sequence number for the block of data.

49. (previously presented) The method of claim 48, wherein the TCB includes IP source and destination addresses and TCP port numbers.

50-59. (canceled)